1. Which of the following methods do we use to find the best fit line for data in Linear Regression?
D) Both A and B

2. Which of the following statement is true about outliers in linear regression?
A) Linear regression is sensitive to outliers

3. A line falls from left to right if a slope is _____?
B) Negative

4. Which of the following will have symmetric relation between dependent variable and independent variable?
B) Correlation

5. Which of the following is the reason for over fitting condition?
C) Low bias and high variance

6. If output involves label then that model is called as:
D) All of the above

7. Lasso and Ridge regression techniques belong to _____?
A) Cross validation

8. To overcome with imbalance dataset which technique can be used?
D) SMOTE

9. The AUC Receiver Operator Characteristic (AUCROC) curve is an evaluation metric for binary classification problems. It uses _____ to make graph?
A) TPR and FPR

10. In AUC Receiver Operator Characteristic (AUCROC) curve for the better model area under the curve should be less.
B) False

11. Pick the feature extraction from below:
B) Apply PCA to project high dimensional data

12. Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?
A) We don't have to choose the learning rate.
B) It becomes slow when number of features is very large.
D) It does not make use of dependent variable.

13. Explain the term regularization?
Ans. Regularization helps Machine Learning model in addressing the overfitting problem. IT helps ML model to avoid the problem of overfitting.

Regularisation is done by i) either by reducing the relevance or by ignoring the relevance of feature for predicting the label based on type of regularisation algorithm
ii) by applying PENALITY on high weightage features
14. Which particular algorithms are used for regularization?

Ans. Two algorithms are used for regularisation i) L1- Lasso ii) L2- Ridge

i) L1- Lasso : if a feature is not relevant for predicting the label and the feature gives overfitting predictions then L1 algorithm completely ignores the importance of feature for prediction on label in model . If a feature has high weightage then penalty (lambda) is applied on feature by LASSOCV (Lasso Cross validation)

ii) L2- Ridge : if a feature is not relevant for predicting the label and the feature gives overfitting predictions then Ridge algorithm gives least importance/relevance to feature for prediction on label in model . If a feature has high weightage then penalty (lambda) is applied on feature by RIDGECV (Lasso Cross validation)

15. Explain the term error present in linear regression equation?

Ans: Error is the residual which is the difference of actual value and predicted value